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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,736	04/04/2001	Gerlinde Bischoff	1583	7767

7590

12/16/2003

Striker Striker & Stenby
103 East Neck Road
Huntington, NY 11743

EXAMINER

SINES, BRIAN J

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

9 KB

Office Action Summary	Application No. 09/806,736	Applicant(s) BISCHOFF ET AL.	
	Examiner Brian J. Sines	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-12 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18 and 19 is/are allowed.
- 6) ☒ Claim(s) 9-12, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9 – 12, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Choulga et al. (WO 96/12176, as evidenced by U.S. Pat. No. 6,004,442 A). U.S. Patent. No. 6,004,442 A was filed as the National Stage application of WO 96/12176. As disclosed in the patent, Choulga et al. teach a measuring probe (biosensor, 2) with a sensor-active layer (analyte-specific polymer membrane, 8) (see col. 14, lines 15 – 39). Choulga et al. teach that no electron transfer is necessary between the electrodes and the analyte-specific layer during AC measurements. The analyte specific layer is modified so that there are changes in the electrical properties, such as an electrical dipole, of the layer in the presence of ions or other materials contained within the sample solution (see col. 4, lines 15 – 39). It is inherently anticipated that the solution, which comprises the covering film, would consist of water. It is inherently anticipated that the solution would consist of the liquid to be analyzed. Choulga et al. teach that several measuring probes can be combined in an array configuration. Choulga et al. teach that multi-analyte probes, which are produced by the combination or integration of multiple electrodes on a sensor unit or on a carrier, covered with layers specific for various analytes (see col. 16, lines 48 – 64). Choulga et al. teach that sensors of mediums selectivity can be integrated in a multi-sensor unit (see col. 16, lines 48 – 64). Choulga et al. teach that the disclosed sensor

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design is compatible with microelectronics, particularly with integrated circuit (IC) technology, and that the sensor arrays can be easily integrated on a substrate together with electronic signal processing systems (see col. 4, lines 40 – 56). Therefore, Choulga et al. anticipate that the disclosed sensor design may be directly implemented into the control circuit of a semiconductor component. Choulga et al. teach that a measurement procedure for the determination of total or absolute conductance. Choulga et al. teach that resistance or conductivity measurements can be made (see col. 3, lines 17 – 29; col. 4, lines 43 – 67). Choulga et al. anticipate that the sensor active layer can consist of an organic semiconductor polymer (see col. 6, line 34 – col. 10, line 38). In use, as shown in figures 1 and 2, the solution (4) would form a covering film over the biosensor (1, 2) (see col. 13, lines 46 – 52; col. 14, lines 15 – 39). Furthermore, regarding claim 11, the recitation that the gas under test is a mixture of air and water vapor is considered a process or intended use limitation. This recited process or intended use limitation is accorded no patentable weight to a claim drawn to an apparatus statutory class of invention. Process limitations do not add patentability to a structure, which is not distinguished from the prior art. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967); and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The Courts have held that it is well settled that the recitation of a new intended use, for an old product, does not make a claim to that old product patentable. See *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). The Courts have held that the manner of operating an apparatus does not differentiate an apparatus claim from the

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prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987) (see MPEP § 2114).

Response to Arguments

Applicant's arguments filed 10/7/2003 have been fully considered but they are not persuasive.

These claims recite various functional limitations, such as how the sensor-active solid layer (4) functions via adsorption in detecting the analyte agent molecules. In addition, the applicant states that the sensor active layer (4) can be made from all types of organic polymer and organic semiconductor polymers (see p. 12, 2nd paragraph of applicants response). However, Choulga et al. teach that their sensor active layer comprises a polymer material as well, thereby meeting the structural and composition requirements of the claimed apparatus (see col. 14, lines 15 – 39). In a claim drawn to an apparatus statutory class of invention, a functional limitation may not be divorced from any specifically recited structure or composition. A functional limitation is an attempt to define an apparatus by what it does, rather than by what it is, *as evidenced by its specific structure* (emphasis added) (see MPEP § 2173.05(g)). Regarding product and apparatus claims, when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent (see MPEP § 2112.01). The Courts have held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. See *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). The Courts have held that apparatus claims must be structurally distinguishable from the prior art in terms of structure,

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not function. See *In re Danley*, 120 USPQ 528, 531 (CCPA 1959); and *Hewlett-Packard Co. V. Bausch and Lomb, Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (see MPEP § 2114).

The preamble for claim 9 is considered an intended use or process limitation, which is merely a statement regarding as to how the probe is to be used, which does not further delineate the structure of the claimed apparatus from that of the prior art. The applicant is advised that since the claim preamble does not contain any terminology that limits the structure of the claimed invention, the preamble is not being treated as a claim limitation (see MPEP § 2111.02). Furthermore, since these claims are drawn to an apparatus statutory class of invention, it is the structural limitations of the apparatus, as recited in the claims, which are considered in determining the patentability of the apparatus itself. These recited process or intended use limitations are accorded no patentable weight to an apparatus. Process limitations do not add patentability to a structure, which is not distinguished from the prior art. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967); and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The Courts have held that it is well settled that the recitation of a new intended use, for an old product, does not make a claim to that old product patentable. See *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). The Courts have held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987) (see MPEP § 2114).

Allowable Subject Matter

Claims 18 and 19 are allowed.

The following is an examiner's statement of reasons for allowance:

The cited prior art neither teach or fairly suggest a measurement procedure for detecting agents in a gaseous or liquid medium and/or measuring concentrations of the agents in the gaseous or liquid medium, wherein the procedure comprises the steps of: a. providing a measuring probe comprising a sensor-active solid layer, which reacts to adsorption of agent molecules from a gas or liquid containing the agent molecules by changing the electrical properties of the sensor active solid layer; a liquid covering film arranged between the gas or liquid and the sensor active solid layer so as to cover the sensor active layer, wherein the liquid covering film is formed from the gas or liquid; and a plurality of electrodes arranged in contact with the sensor active solid layer for measuring the electrical conductance changes due to the presence of the agent molecules in the gas or liquid; b. doping a surface of the measuring probe reversibly with the agent molecules by adsorbing the agent molecules on the surface, so that an active surface is formed, whereby the electrical conductance changes due to the presence of the agent molecules in the gas or liquid; and c. measuring the electrical conductance changes with the measuring probe provided in step a, wherein the total electrical conductance measured by the measuring probe comprises partial conductances of the solid active layer, the liquid covering film, the active surface and the gas or liquid, without compensation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines, Ph.D. whose telephone number is (703) 305-0401. The examiner can normally be reached on Monday - Friday (11:30 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (703) 308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Jill Warden
Supervisory Patent Examiner
Technology Center 1700